



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,237	05/07/2001	Paul D. Marko	41750	9474

1609 7590 05/31/2005

ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P.  
1300 19TH STREET, N.W.  
SUITE 600  
WASHINGTON,, DC 20036

EXAMINER
----------

SEFCHECK, GREGORY B

ART UNIT	PAPER NUMBER
----------	--------------

2662

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

8m

# Office Action Summary

Application No.

09/849,237

Applicant(s)

MARKO, PAUL D.

Examiner

Gregory B. Sefcheck

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 May 2001 and 06 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |                                                                                                    |                                                                             |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____                                                |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/25/05, 11/7/03, 9/25/02, 5/29/02, 11/6/01</u>                           | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

- The Preliminary Amendment filed 8/20/2001 is acknowledged.
- The replacement drawing of Fig. 9 filed 11/6/2001 is approved.

### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-8, and 10-13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 5-8, and 16-18 of U.S. Patent No. 6,229,824. Although the conflicting claims are not identical, they are not patentably distinct from each other.

- In regards to Claims 1-3, 5-8 and 10-12,

Claims 1-3, 5-8 and 10-12 are substantially the same as claims 1-3, 5-8, and 16-18 of USP 6,229,824.

Claims 1, 10, and 11 of the instant application recite that transmission is performed on (at least) one transmission channel, whereas claims 1, 16, and 17 of USP 6,229,824 recite that transmission is performed on a plurality of separate channels.

Even though claims 1, 10, and 11 of current application are broadened by omitting the limitation of plural, separate channels in claims 1, 16, and 17 of USP 6,229,824, it has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 136 USPQ 184(CCPA). Also note Ex parte Rainu, 168 USPQ 375 (Bd. App. 1969); omission of a reference element whose function is not needed would be an obvious variation.

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the methods and apparatus of the current application using one transmission channel or plural, separate transmission channels, as shown in USP 6,229,824, since the methods and apparatus function the same regardless of the number of transmission channels used.

- In regards to Claims 4 and 13,

Claims 1 and 11, which claims 4 and 13 depend from, are substantially the same as claims 1 and 17 of USP 6,229,824.

Though USP 6,229,824 does not explicitly disclose transmission via a satellite or terrestrial transmitter, it is inherent that a transmitter would be based from either a

Art Unit: 2662

satellite or terrestrial platform (claim 4,13 – transmission via satellite or terrestrial transmitter).

3. Claims 9 and 14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 17 of U.S. Patent No. 6,229,824 in view of Schramm (US005812601A).

- In regards to Claims 9 and 14,

Claims 1 and 11, which claims 4 and 13 depend from, are substantially the same as claims 1 and 17 of USP 6,229,824.

USP 6,229,824 does not explicitly recite that the time-interleaving functions can vary during transmission of interleaved data stream.

Schramm discloses coding for higher-level modulation. Schramm shows that time-interleaving functions may vary during transmission of data in order to optimize coding over fading channels (Col. 4, lines 32-45; claim 9,14 – time-interleaving functions can vary during transmission of interleaved data stream).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the methods and apparatus of USP 6,229,824 by varying the time-interleaving functions during transmission, enabling optimization of coding for transmission over fading channels, as shown by Schramm.

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Salvi et al. (US 20040139383A1) discloses a method and apparatus for coding bits of data in parallel
- Kim et al. (US 20040123229A1) discloses encoding/decoding apparatus using low density parity check code
- Suzuki et al. (US 20040005012A1) discloses an information transmission apparatus, information transmission method, information reception apparatus, and information reception method
- Okada et al. (US 20010055271A1) discloses a reception apparatus
- Collins (US004797589) discloses a dynamically reconfigurable time-space-time digital switch and network

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B. Sefcheck whose telephone number is 571-272-3098. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2662

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GBS  
5-25-2005



HASSAN KIZOU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600